

**CLAIMS:**

1. A method for screening a chemical compound for activity in the treatment, prevention or alleviation of an osteoclast related bone disease in a subject, which  
5 method comprises the following steps:
  - providing a test cell comprising one or more chloride channels of the CIC family;
  - subjecting the test cell to the action of the chemical compound; and
  - measuring the ability of the compound to block the selected chloride channels.
- 10 2. The method according to claim 1, wherein the test cell comprises one or more chloride channels selected from the group consisting of CIC-3, CIC-6, CIC-7 and functional analogues thereof.
3. The method according to any one of claims 1 or 2 wherein the osteoclast  
15 related bone disease is osteoporosis, osteolytic cancer invasion, osteopetrosis, or Paget's disease of bone.
4. A drug development method, which comprises the identification of a compound by the method according to any one of the claims 1-3.
- 20 5. The use of a compound identified as a blocker of a chloride channel of the CIC family by the method according to any one of the claims 1-3 or a pharmaceutically acceptable salt or a prodrug thereof for the manufacture of a medicament for the treatment, prevention or alleviation of an  
25 osteoclast related bone disease in a subject.
6. A method for the treatment, prevention, or alleviation of an osteoclast related bone disease in a subject comprising administering to said subject a therapeutically effective amount of a compound identified as a blocker of a chloride channel of the  
30 CIC family by the method according to any one of the claims 1-3 or a pharmaceutically acceptable salt or a prodrug thereof.
7. The use of a blocker of a chloride channel of the CIC family or a pharmaceutically acceptable salt or a prodrug thereof  
35 for the manufacture of a medicament for the treatment, prevention or alleviation of an osteoclast related bone disease in a subject.

8. A method for the treatment, prevention, or alleviation of an osteoclast related bone disease in a subject comprising administering to said subject a therapeutically effective amount of a blocker of a chloride channel of the ClC family or a pharmaceutically acceptable salt or a prodrug thereof.